

APPLICANT(S): NAPADENSKY, Eduardo et al.  
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#### REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested. Applicants would like to thank the Examiner for identifying issues in the application.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

#### Status of Claims

Claims 1 - 124 are pending in the application. Claims 1 - 79 and 106 - 124 have been withdrawn from consideration. Claims 80 - 105 have been rejected. Claims 58 - 64, 66 - 74, 80 - 85, 88 - 91, 93 - 111, 103 - 108 and 112 have been amended.

Claims 1 - 57, 65, 75 - 79, 109 - 111 and 113 - 124 have been canceled without prejudice or disclaimer. In making this cancellation without prejudice, Applicants reserve all rights in these claims to file divisional and/or continuation patent applications.

#### ELECTION/RESTRICTION

Applicant affirms the provisional election made with traverse to prosecute the invention of Group XI, claims 80 - 105. Claims 1 - 57, directed to inventions of Group I-VIII and claims 76 - 79, directed to the invention of Group X has been cancelled. Applicant reserves all rights to file divisional application(s) for the non-elected subject matter. The election is made with traverse for the following reasons:

Applicant asserts that groups IX, XI and XII are all drawn to the same invention and should be examined together.

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The Examiner has stated that invention XI, claims 80 – 105 and invention X, claims 58 - 75 are related as process of making and product made. Independent claims 80 and 58 have been amended such that the inventions are not distinct.

The Examiner has stated that invention XI, claims 80 – 105 and invention XII claims 106 – 124 are related as process and apparatus for its practice. Independent claims 80 and 106 has been amended such that the inventions are not distinct as the process as claimed in claim 80 cannot be practiced by the different apparatus set forth in Groups V ~ VIII.

### **CLAIM OBJECTIONS**

In the Office Action, the Examiner objected to claims 80-105 because of alleged informalities. Claims 80 – 85, 88 – 91 and 93 – 105 have been amended in order to cure these informalities. Accordingly, Applicants request withdrawal of the objection.

### **CLAIM REJECTIONS**

#### **35 U.S.C. § 112 Rejections**

In the Office Action, the Examiner rejected claims 80-105 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 80 – 85, 88 – 91 and 93 – 105 have been amended. Accordingly, Applicants respectfully assert that these amendments render claims 80 – 85, 88 – 91 and 94 – 105 proper under 35 U.S.C §112 and request that the rejections be withdrawn.

#### **35 U.S.C. § 102 Rejections**

Claims 80-103 are rejected under 35 U.S.C. § 102(b), as being anticipated by WO 00/11092.

Claims 80-85, 88-94, and 97-105 are rejected under 35 U.S.C. 102(b) as being anticipated by Helinski (5,136,515).

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Claims 80-99 and 101-103 are rejected under 35 U.S.C. 102 (b) as being anticipated by Cima et al. (5,387,380).

Claims 80-98 and 101-104 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamane et al. (5,059,266).

Claims 80-94, 97-98 and 100-104 are rejected under 35 U.S.C. 102(b) as being anticipated by Napadensky in US 2002/0016386, published 02/07/2002.

As is well established, in order to successfully assert a *prima facie* case of anticipation, the Examiner must provide a single prior art document that includes every element and limitation of the claim or claims being rejected.

Claim 80 has been amended.

Amended claim 80 recites: “*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*” and further “*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of said first material and said second material*”.

WO 00/11092 is directed to a selective deposition modeling material which is a mixture of a base material, a plasticizing component and a tackifying resin. The material, which is not a multi-phase composite material, is dispensed from a single container.

WO 00/11092 does not teach, either expressly or inherently, all the elements of independent claim 80. In particular, WO 00/11092 does not disclose at least “*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*” and further “*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of said first material and said second material*”, as recited in claim 80. Accordingly claim 80 is allowable.

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Helinski (US 5,136,515) is directed to producing a three-dimensional object layer by layer by jetting droplets of at least two different materials, the first material forming the article itself and the second material forming a support for the article as necessary (see Abstract). None of these materials is a multi-phase composite material, as recited in claim 80

Helinski does not teach, either expressly or inherently, all the elements of independent claim 80. In particular, Helinski does not disclose at least "*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*" and further "*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of said first material and said second material*", as recited in claim 80. Accordingly claim 80 is allowable.

Cima et al. (5,387,380) is directed to a process for making a component by depositing a first layer of a powder material in a confined region and then depositing a binder material to selected regions of the layer of powder material to produce a layer of bonded powder material at the selected regions (see Abstract).

Cima et al. does not teach, either expressly or inherently, all the elements of independent claim 80. In particular, Cima et al. does not disclose at least "*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*" and further "*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of said first material and said second material*", as recited in claim 80. Accordingly claim 80 is allowable.

As stated by the Examiner, Yamane et al. (5,059,266) disclose a method for forming a three-dimensional article wherein a photosetting or thermosetting material is jetted from ink jet heads to a stage, laminated and exposed to light to cure.

Yamane et al. does not teach, either expressly or inherently, all the elements of independent claim 80. In particular, Yamane et al. does not disclose at least "*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*" and further "*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of*

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*said first material and said second material*", as recited in claim 80. Accordingly claim 80 is allowable.

US 2002/0016386 is directed to composition for use in the manufacture of 3-D objects including compositions for use as a support and/or release material in the manufacture of the 3-D objects.

US 2002/0016386 does not teach, either expressly or inherently, all the elements of independent claim 80. In particular, US 2002/0016386 does not disclose at least "*pre-designing a three-dimensional structure of said multi-phase composite material according to desired properties of said composite material*" and further "*each said layer comprises one or more phases of said multi-phase composite material, each said phase comprises one or more of said first material and said second material*", as recited in claim 80. Accordingly claim 80 is allowable.

Claims 81 – 105 depend directly or indirectly from claim 80, and thereby include all the limitations of claim 80 as well as additional distinguishing elements. Therefore, claims 81 - 105 are patentable for at least the reasons discussed above with regard to claim 80.

In view of the above remarks, Applicants respectfully request that the above rejections of claims 80 - 105 under 35 U.S.C. § 102(b) be withdrawn.

Claims 80-105 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,569,373 (Napadensky).

Applicants respectfully traverse this rejection in view of the remarks that follow. US 6,569,373 serves as a priority document to the subject application. The subject application is a continuation-in-part application of patent application 10/424,732, filed on April 29, 2003, which is a continuation-in-part application of patent application 09/803, 108, now patent No. 6,569,373. Accordingly, the rejection should be withdrawn.

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### **Double Patenting Rejections**

In the Office Action, the Examiner provisionally rejects claims 80-105 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 35-63 of copending Application No. 09/797,869 (Napadensky prepub US 2002/0016386).

Applicants respectfully traverse this rejection in view of the remarks that follow. US application No. 09/797,869 is not pending; rather it has been abandoned. The "Notice of Abandonment" was issued by the United State Patent and Trademark Office on May 6, 2003. Accordingly, the rejection should be withdrawn.

Claims 80-105 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 17-20 of copending Application No. 10/724,399 (Gothait et al. in US 2005/0069784).

Independent claim 80 has been amended. Accordingly, claims 80-105 are now patentably distinct from claims 1-7 and 17-20 of copending Application No. 10/724,399. Accordingly, Applicants respectfully request that the above rejections of claims 80 - 105 be withdrawn.

Claims 80-105 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-42 of U.S. Patent No. US 6,569,373 (Napadensky).

Independent claim 80 has been amended. Accordingly, claims 80-105 are now patentably distinct from claims 1 - 42 of U.S. Patent No. US 6,569,373. Accordingly, Applicants respectfully request that the above rejections of claims 80 - 105 be withdrawn.

### **CONCLUSION**

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

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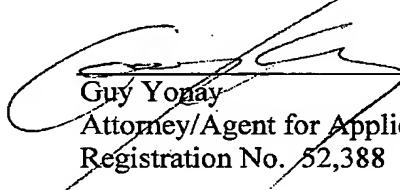
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Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,



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